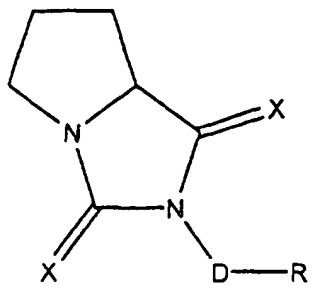
**Detailed Listing of Claims:**

1. (Currently Amended) A compound of the formula:




or a pharmaceutically acceptable salt, ester or solvate wherein:

each X independently is O, S, or $NR_2$;

$R_2$ is selected from the group consisting of cyano, nitro, hydrogen, $C_1$-$C_4$ alkyl, hydroxy, and $C_1$-$C_4$ alkoxy;

D is a direct bond or $C_1$-$C_8$ alkyl or alkenyl;

R is selected from the group consisting of hydrogen, phenyl, biphenyl, cyclopropyl, cyclobutyl, cyclopentyl, cycloheptyl, cyclooctyl, naphthyl, 1,2,3,4-tetrahydronaphthyl, indenyl, azulenyl, fluorenyl, anthracenyl, isoindolyl, indolinyl, benzofuranyl, benzothiophenyl, indazolyl, benzimidazolyl, tetrahydrofuranyl, tetrahydropyranyl, pyridyl, pyrrolyl, pyrrolidinyl, pyridinyl, pyrimidinyl, purinyl, quinolinyl, isoquinolinyl, tetrahydroquinolinyl, quinolizinyl, furyl, benzofuranyl, thiophenyl, imidazolyl, oxazolyl, benzoxazolyl, benzoxazinyl, thiazolyl, isoxazolyl, isotriazolyl, oxadiazolyl, triazolyl, thiadiazolyl, pyridazinyl, pyrimidinyl, pyrazinyl, triazinyl, trithianyl, indolizinyl, pyrazolyl, pyrazolinyl, pyrazolidinyl, benzopyranyl, thienyl, tetrahydroisoquinolinyl, cinnolinyl, phthalazinyl, quinazolinyl, quinoxalinyl, naphthyridinyl, pteridinyl, carbazolyl, phenazinyl, phenothiazinyl, phenoxazinyl, and adamantyl;

wherein R may be optionally substituted with one substituent which is selected from the group consisting of halo, hydroxyl, nitro, trifluoromethyl, $C_1$-$C_6$ straight or branched chain alkyl, $C_2$-$C_6$ straight or branched chain alkenyl, $C_1$-$C_4$ alkoxy, $C_2$-$C_4$ alkenyloxy, phenyl, phenoxy, benzyloxy, and amino;

wherein when R is hydrogen, then D is $C_5$-$C_7$ alkyl or $C_5$-$C_8$ alkenyl;

wherein when R is phenyl and D is a bond, then R is substituted with phenyl, hydroxyl, trifluoromethyl, $C_2$-$C_6$ straight or branched chain alkyl or alkenyl, $C_3$-$C_4$ alkoxy, $C_2$-$C_4$ alkenyloxy, phenoxy, or benzyloxy;

wherein when R is 4-trifluoromethylphenyl, then both X substituents are O;

wherein when both X substituents are O and D is $C_2$ alkyl, then R is not phenyl substituted with 4-nitro or 4-amino;

wherein when both X substituents are O and R is H, D is not $C_1$-$C_8$ alkyl;

wherein when both X substituents are O and D is $C_1$ alkyl, R is not phenyl;

wherein when both X substituents are O and D is a direct bond, then R is not phenyl substituted with 3-trifluoromethyl;

wherein when one X is O, the other X is S, and D is a direct bond, then R is not phenyl substituted with 3-trifluoromethyl; and

wherein when both X substituents are O and D is $C_3$ straight chain alkyl, then R is not phenyl substituted with 3-methoxy,

with the proviso that (7aS) -2- (4 - (Trifluoromethyl) phenyl) perhydropyrrolo [1, 2-c] imidazole-1, 3-dione is excluded from the compound.

2. (Currently Amended) The compound according to claim 1 that is selected from the group consisting of:

(7aS) -2- (1-Naphthyl) perhydropyrrolo [1, 2-c] imidazole-1, 3-dione,

(7aS) -2- (2' -Phenyl) phenylperhydropyrrolo [1, 2-c] imidazole-1, 3-dione,

~~(7aS) -2- (4 - (Trifluoromethyl) phenyl) perhydropyrrolo [1, 2-c] imidazole-1, 3-dione,~~

2-benzyl-3-thioxo-2, 5, 6, 7, 7a-pentahydro-2-azapyrrolizin-1-one,

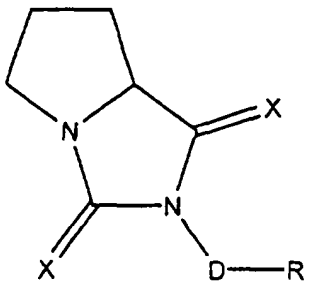
2-hexyl-2, 5, 6, 7, 7a-pentahydro-2-azapyrrolizine-l, 3-dione,

2-(2-ethyl) phenyl-2, 5, 6, 7, 7a-pentahydro-2-azapyrrolizin-1, 3-dione,

2-(3-phenylpropyl) -3-thioxo-2, 5, 6, 7, 7a-pentahydro-2-azapyrrolizin-1-one, and

2-(2-phenylethyl) -3-thioxo-2, 5, 6, 7, 7a- pentahydro-2-azapyrrolizin-1-one.

3. (Previously Presented) A pharmaceutical composition comprising an effective amount of a compound and a pharmaceutically acceptable carrier, wherein the compound is of the formula:




where

each X independently is O, S, or $NR_2$;

$R_2$ is selected from the group consisting of cyano, nitro, hydrogen, $C_1$-$C_4$ alkyl, hydroxy, and $C_1$-$C_4$ alkoxy;

D is a direct bond or $C_1$-$C_8$ alkyl or alkenyl;

R is an alicyclic or aromatic, mono-, bi- or tricyclic, carbo- or heterocyclic ring, wherein when R is an alicyclic monocyclic heterocyclic ring containing a nitrogen heteroatom, the alicyclic monocyclic heterocyclic ring contains only one nitrogen heteroatom;

wherein R is optionally substituted with one substituent selected from the group consisting of hydrogen, halo, hydroxyl, nitro, trifluoromethyl, $C_1$-$C_6$ straight or branched chain alkyl, $C_2$-$C_6$ straight or branched chain alkenyl, $C_1$-$C_4$ alkoxy, $C_2$-$C_4$ alkenyloxy, phenyl, phenoxy, benzyloxy, and amino;

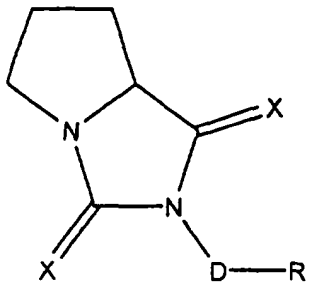
or a pharmaceutically acceptable salt, ester, or solvate thereof.

4. (Original) The pharmaceutical composition of claim 3, further comprising an additional neurotrophic factor.

5. (Currently Amended) The pharmaceutical composition of claim 4, wherein the additional neurotrophic factor is selected from the group consisting of neurotrophic growth factor, brain derived growth factor, glial derived growth factor, cilial neurotrophic factor, insulin growth factor ~~and active truncated derivatives thereof~~, acidic fibroblast growth factor, basic fibroblast growth factor, platelet-derived growth factors, neurotropin-3, and neurotropin-4/5.

6-62 (Canceled).

63. (Previously Presented) The pharmaceutical composition according to claim 3, wherein the compound is selected from compounds of the formula:




or a pharmaceutically acceptable salt, ester or solvate wherein:

each X independently is O, S, or $NR_2$;

$R_2$ is selected from the group consisting of cyano, nitro, hydrogen, $C_1$-$C_4$ alkyl, hydroxy, and $C_1$-$C_4$ alkoxy;

D is a direct bond or $C_1$-$C_8$ alkyl or alkenyl;

R is selected from the group consisting of hydrogen, phenyl, biphenyl, cyclopropyl, cyclobutyl, cyclopentyl, cycloheptyl, cyclooctyl, naphthyl, 1,2,3,4-tetrahydronaphthyl, indenyl, azulenyl, fluorenyl, anthracenyl, isoindolyl, indolinyl, benzofuranyl, benzothiophenyl, indazolyl, benzimidazolyl, tetrahydrofuranyl, tetrahydropyranyl, pyridyl, pyrrolyl, pyrrolidinyl, pyridinyl, pyrimidinyl, purinyl, quinolinyl, isoquinolinyl, tetrahydroquinolinyl, quinolizinyl, furyl, benzofuranyl, thiophenyl, imidazolyl, oxazolyl, benzoxazolyl, benzoxazinyl, thiazolyl, isoxazolyl, isotriazolyl, oxadiazolyl, triazolyl, thiadiazolyl, pyridazinyl, pyrimidinyl, pyrazinyl, triazinyl, trithianyl, indolizinyl, pyrazolyl, pyrazolinyl, pyrazolidinyl, benzopyranyl, thienyl, tetrahydroisoquinolinyl, cinnolinyl, phthalazinyl, quinazolinyl, quinoxalinyl, naphthyridinyl, pteridinyl, carbazolyl, phenazinyl, phenothiazinyl, phenoxazinyl, and adamantyl;

wherein R may be optionally substituted with one substituent which is selected from the group consisting of halo, hydroxyl, nitro, trifluoromethyl, $C_1$-$C_6$ straight or branched chain alkyl,

$C_2$-$C_6$ straight or branched chain alkenyl, $C_1$-$C_4$ alkoxy, $C_2$-$C_4$ alkenyloxy, phenyl, phenoxy, benzyloxy, and amino;

wherein when R is hydrogen, then D is $C_5$-$C_7$ alkyl or $C_5$-$C_8$ alkenyl;

wherein when R is phenyl and D is a bond, then R is substituted with phenyl, hydroxyl, trifluoromethyl, $C_2$-$C_6$ straight or branched chain alkyl or alkenyl, $C_3$-$C_4$ alkoxy, $C_2$-$C_4$ alkenyloxy, phenoxy, or benzyloxy;

wherein when R is 4-trifluoromethylphenyl, then both X substituents are O;

wherein when both X substituents are O and D is $C_2$ alkyl, then R is not phenyl substituted with 4-nitro or 4-amino;

wherein when both X substituents are O and R is H, D is not $C_1$-$C_8$ alkyl;

wherein when both X substituents are O and D is $C_1$ alkyl, R is not phenyl;

wherein when both X substituents are O and D is a direct bond, then R is not phenyl substituted with 3-trifluoromethyl;

wherein when one X is O, the other X is S, and D is a direct bond, then R is not phenyl substituted with 3-trifluoromethyl; and

wherein when both X substituents are O and D is $C_3$ straight chain alkyl, then R is not phenyl substituted with 3-methoxy.

64. (Previously Presented) The pharmaceutical composition according to claim 3, wherein the compound is selected from the group consisting of:

(7aS) -2-(1-Naphthyl) perhydropyrrolo [1, 2-c] imidazole-1, 3-dione,

(7aS) -2-(2'-Phenyl) phenylperhydropyrrolo [1, 2-c] imidazole-1, 3-dione,

(7aS) -2- (4- (Trifluoromethyl) phenyl) perhydropyrrolo [1, 2-c] imidazole-1, 2-dione,

2-benzyl-3-thioxo-2, 5, 6, 7, 7a-pentahydro-2-azapyrrolizin-1-one,

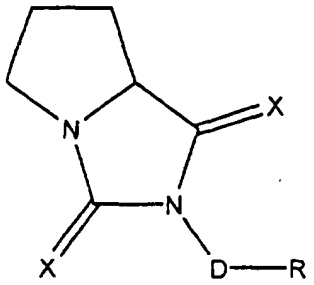
2-hexyl-2, 5, 6, 7, 7a-pentahydro-2-azapyrrolizine-1, 3-dione,

2-(2-ethyl) phenyl-2, 5, 6, 7, 7a-pentahydro-2-azapyrrolizin-1, 3-dione,

2-(3-phenylpropyl) -3-thioxo-2, 5, 6, 7, 7a-pentahydro-2-azapyrrolizin-1-one, and

2- (2-phenylethyl) -3-thioxo-2, 5, 6, 7, 7a-pentahydro-2-azapyrrolizin-1-one.

65. (Previously Presented) A pharmaceutical composition comprising an effective amount of a compound and a pharmaceutically acceptable carrier, wherein the compound is of the formula:




where

each X independently is O, S, or $NR_2$;

$R_2$ is selected from the group consisting of cyano, nitro, hydrogen, $C_1$-$C_4$ alkyl, hydroxy, and $C_1$-$C_4$ alkoxy;

D is a direct bond or $C_1$-$C_8$ alkyl or alkenyl;

R is hydrogen, or an alicyclic or aromatic, mono-, bi- or tricyclic, carbo- or heterocyclic ring, wherein when R is an alicyclic monocyclic heterocyclic ring containing a nitrogen heteroatom, the alicyclic monocyclic heterocyclic ring contains only one nitrogen heteroatom;

wherein R is optionally substituted with one substituent selected from the group consisting of hydrogen, halo, hydroxyl, nitro, trifluoromethyl, $C_1$-$C_6$ straight or branched chain alkyl, $C_2$-$C_6$ straight or branched chain alkenyl, $C_1$-$C_4$ alkoxy, $C_2$-$C_4$ alkenyloxy, phenyl, phenoxy, benzyloxy, and amino;

wherein when both X substituents are O and D is a bond, R is not phenyl;

wherein when one X is O and the other is S and D is a bond, then R is not phenyl;

wherein when both X substituents are O and R is H, D is not $C_1$-$C_8$ alkyl;

or a pharmaceutically acceptable salt, ester, or solvate thereof.

66. (Previously Presented) The pharmaceutical composition of claim 65, further comprising an additional neurotrophic factor other than said compound.

67. (Previously Presented) A method of treating a neurological disorder in an animal, comprising:

administering to the animal an effective amount of a compound to stimulate growth of damaged peripheral nerves or to promote neuronal regeneration, wherein the compound is one of claim 1.

68. (Previously Presented) A method of stimulating growth of damaged peripheral nerves, comprising:

administering to damaged peripheral nerves an effective amount of a compound to stimulate or to promote growth of the damaged peripheral nerves, wherein the compound is one of claim 1.